**Spatial dimension** means looking at the inequalities (eg: adult literacy, distribution of the population, availability of natural resources, infant mortality) between geographical regions, examining the distribution of resources and services. Often spatial dimensions

**Ecological dimension** describes the relationship between people and the natural elements of the environment and the impacts that they have upon one another. Studying geography from an ecological perspective is extremely important because geography essentially is the study of the way humans interact with the environments that surround them.

**Introduction**

There is a fixed amount of water on Earth. The rapid growth of the global population means that the amount of water available per person is decreasing. Issues surrounding water, such as water sanitation, are related to and have an affect on the issues of poverty, unemployment, disease and food supply. Most directly, water is misused through agricultural and irrigation practices.

**The Issue of Access to fresh water**

About one-third of the global population lives in 'water-stressed' regions. This means they have little access to fresh water. Water-stressed and water scarce regions are generally found within developing nations, and nations that receive little yearly rainfall. The majority of the people in poor regions only have access to unsanitary water which leads to sickness and death, as they do not have adequate medical treatments. In most cases, this could be prevented through better water distribution and management worldwide.

Industry and agriculture

Together, industry and agriculture account for the use of nearly 90 percent of the annual fresh water stores on a global scale. In America, agriculture is responsible for using about 80 percent of the nation's fresh water stores annually. Often, about half of the water intended for crops never actually reaches those crops because of poor irrigation techniques.

Salinisation occurs on land that is poorly irrigated. Excess salts in the ground water and run-off kills plants and affects the rivers and streams. Pollution from pesticides, fertilizers and urban and industrial areas are draining into the rivers and ground water. This is killing the natural plants and animals that live there, and is polluting our fresh water stores.

Wheat and beef are major agricultural exports in Australia. Every kilogram of wheat produced requires about 900 litres of water. Anywhere from 15 000 to 43 000 litres of water are required to produce 1 kilo of beef. Dairy cows generally require more water than beef cows because they rely on water in the grass to produce milk.

Rivers and dams

Waste dumped into streams and rivers may seem like it disappears, but it is carried downstream to other communities and eventually to the oceans. Misuse and overuse of rivers upstream has an adverse affect on the people, plants and animals that live downstream. Water becomes unsanitary with higher salinity levels. In many cases water flow does not reach the mouth of a river because it has all been extracted for human use.

One method used to help retain water is the construction of dams. When a river is dammed, the surrounding low-lying land is flooded. This destroys natural habitats and forces communities to migrate. There are approximately 45 000 large dams around the world which affect over half of the major rivers in the world. It is estimated that around 80 million people have been forced to relocate because of these dams. China contains almost half of all the worldwide dams.

Perspectives on the issue

Agriculture

Agriculture is a huge industry that provides jobs for people around the world and provides the world with food. In most developed countries, the goal of agriculture is not only to provide consumers with various products, but to also make money. In the European Union, most members of the Policy Committee for Agriculture believe that farmers should maximise use of the land and as such, fertilisers and pesticides are used extensively to help increase the productivity of annual crops. When an industry has done so well for the global economy, it is difficult for some people to understand the environmental impacts that unsustainable farming practices are having on our global fresh water supplies.

Urban residents

Urban residents are the people who live in cities and surrounding suburbs. Urban residents are consumers. We consume water every day for purposes other than cooking and drinking. We use water for laundry and bathing, in the garden, to wash the car and for various other household tasks. Most water that enters into urban households is used to flush the toilet.

Urban residents also contribute to water contamination. Aside from industrial emissions, cars are responsible for the emission of various harmful and toxic gases into the air. Air pollution creates acid rain. Acid rain is term used to describe rain that contains a high percentage of pollutants. Urban residents also pollute waterways with the various chemicals, fertilisers, oils, detergents and other pollutants that are found in urban households.

Find four primary and secondary sources about access to fresh water:

http://www.freshwater.net/

http://academic.evergreen.edu/g/grossmaz/larsenst/

http://news.bbc.co.uk/hi/english/static/in\_depth/world/2000/world\_water\_crisis/default.stm

http://water.org/learn-about-the-water-crisis/facts/